

**WHAT IS CLAIMED IS:**

1. A multi-wavelength laser, comprising:
  - (a) a pump laser source;
  - (b) an optical gain module (OGM) for receiving the output of the laser sources;
  - (c) a periodic band-pass filter (PBF) in a feedback loop between output and input of the optical gain module; and
  - (d) the output of the OGM being an output of said multi-wavelength laser.
2. The multi-wavelength laser as defined in claim 1, said OGM including a gain flattening filter (GFF) between it and said periodic BPF.